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EXAMINER
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LEE, PHILIP C

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 09/726,766	<b>Applicant(s)</b> DAVIDSON ET AL.	
	<b>Examiner</b> Philip C Lee	<b>Art Unit</b> 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-24,26-33 and 35-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-24,26-33 and 35-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/2/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. This action is responsive to the amendment and remarks filed on July 2, 2004.
2. Claims 1, 3-24, 26-33 and 35-45 are presented for examination.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

*Claim Rejections – 35 USC 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, 10-14, 18-21, 23-24, 28-29, 31-33 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araujo et al, U.S. Patent 6,301,229 (hereinafter Araujo) in view of Inoue et al, U.S. Patent Application Publication 2002/0007414 (hereinafter Inoue).
6. Araujo was cited in the last office action.

7. As per claims 1 and 12, Araujo taught the invention substantially as claimed for communicating with an element within an enterprise network, comprising:

at a first client, encapsulating a first point-to-point protocol signal within a protocol header (col. 2, lines 1-4; col. 9, lines 13-15; col. 14, lines 44-50); and communicating the encapsulated signal toward a tunneling server (col. 9, lines 34-36; col. 6, lines 1-3, 32-38).

8. Araujo did not specifically teach encapsulating a network address request header. Inoue taught encapsulating a network address request header comprising a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header, the first point-to-point protocol signal comprising a header that includes an identifier of a second client (figs. 9 and 10; page 7, paragraphs 82 and 96).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo and Inoue because Inoue's method of encapsulating a dynamic host configuration protocol request would increase the alertness of Araujo's system by providing the recognition that the IP address is to be acquired by the DHCP on behalf of the client (page 7, paragraph 84).

10. As per claim 19, Araujo taught the invention substantially as claimed for tunneling in an enterprise network comprising a plurality of clients coupled to a tunneling server (col. 8, lines 66-col. 9, lines 8) by at least one router (col. 7, lines 17-31), the method comprising:

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at a first client, generating point-to-point protocol signal (col. 4, lines 21-33; col. 6, lines 1-5; col. 7, lines 32-42);

encapsulating the point-to-point protocol signal within a protocol header (col. 2, lines 1-4; col. 9, lines 13-15; col. 14, lines 44-50);

communicating the encapsulated signal toward a tunneling server (col. 9, lines 34-36; col. 6, lines 1-3, 32-38) operable to identify and remove the protocol header (col. 13, lines 37-47), to encapsulate the point-to-point protocol signal within a protocol response header, and to communicate the encapsulated response signal toward a second client (col. 13, lines 34-36, 48-56).

11. Araujo did not specifically teach encapsulating a network address request header. Inoue taught encapsulating a dynamic host configuration protocol request into a request (figs. 9 and 10; page 7, paragraphs 82 and 96).

12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo and Inoue because Inoue's method of encapsulating a dynamic host configuration protocol request would increase the alertness of Araujo's system by providing the recognition that the IP address is to be acquired by the DHCP on behalf of the client (page 7, paragraph 84).

13. As per claims 24 and 37, Araujo taught the invention substantially as claimed comprising at least one client coupled to a tunneling server by a router having a routing table indexed by data channel addresses (fig. 1), a first client comprising:

a protocol stack operable to generate a first point-to-point protocol signal (col. 4, lines 21-33; col. 6, lines 1-5; col. 7, lines 32-42); and

a tunneling module operable to encapsulate the first point-to-point encapsulated signal within a protocol header (col. 2, lines 1-4; col. 9, lines 13-15; col. 14, lines 44-50);

wherein the first client is operable to communicate the protocol request encapsulated signal toward the router for forwarding to the tunneling server (col. 9, lines 34-36; col. 6, lines 1-3, 32-38).

14. Araujo did not specifically teach encapsulating a network address request header. Inoue taught encapsulating a network address request header comprising a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header, the first point-to-point protocol signal comprising a header that includes an identifier of a second client (page 7, paragraphs 82 and 96). Inoue further taught forwarding the network address request to the tunneling server without reference to the routing table (page 7, paragraph 84).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo and Inoue because Inoue's method of encapsulating a dynamic host configuration protocol request would increase the alertness of

Araujo's system by providing the recognition that the IP address is to be acquired by the DHCP on behalf of the client (page 7, paragraph 84).

16. As per claim 33, Araujo taught the invention substantially as claimed wherein a client (element 10, fig. 1) having an enterprise protocol stack operable to process signals received from a data channel and associated with a data channel address (col. 3, lines 11-24), the client comprising:

a tunneling module operable to receive a first point-to-point protocol signal encapsulated within a protocol response header (col. 2, lines 1-16; col. 9, lines 13-15, 49-62; col. 11, lines 1-9) and to remove the protocol response header to expose the first point-to-point protocol signal (col. 3, lines 21-26); and

a private protocol stack operable to receive the first point-to-point protocol signal from the tunneling module and to communicate at least a portion of a payload of the first point-to-point protocol signal to a socket layer coupled to an application residing at the client (col. 3, lines 21-26, 40-43; col. 4, lines 41-46).

17. Araujo did not specifically teach encapsulating a network address request header. Inoue taught encapsulating a network address request header comprising a header that includes an identifier of a client, the network address response header comprising a Dynamic Host Configuration Protocol OFFER header or a Bootstrap Protocol RESPONSE header (figs. 9 and 10; page 7, paragraphs 82 and 96).

18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo and Inoue because Inoue's method of encapsulating a dynamic host configuration protocol request would increase the alertness of Araujo's system by providing the recognition that the IP address is to be acquired by the DHCP on behalf of the client (page 7, paragraph 84).

19. As per claims 3, 13 and 20, Araujo and Inoue taught the invention substantially as claimed in claims 1, 12 and 19 above. Araujo and Inoue further taught wherein communicating the encapsulated signal toward a tunneling server comprises communicating the signal toward a router configured to relay network address requests to the tunneling server (see Araujo, col. 7, lines 17-31) without referencing a routing table indexed by data channel addresses (see Inoue, page 7, paragraph 84).

20. As per claims 4, 14, 21 and 28-29, Araujo and Inoue taught the invention substantially as claimed in claims 3, 13, 20 and 24 above. Inoue further taught wherein the identifier comprises a control channel address of the second client, the control channel address being different from any data channel address recognized by the router (page 7, paragraph 84).

21. As per claims 10, 18, 23 and 31, Araujo and Inoue taught the invention substantially as claimed in claims 1, 12, 19 and 24 above. Inoue further taught comprising receiving an encapsulated response signal from the tunneling server, the encapsulated response signal



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comprising a second point-to-point protocol signal responsive to the first point-to-point protocol signal and encapsulated within a network address response header (page 7, paragraph 96).

22. As per claims 11 and 32, Araujo and Inoue taught the invention substantially as claimed in claims 10 and 31 above. Inoue further taught wherein the network address response header comprises a Dynamic Host Configuration Protocol OFFER header or a Bootstrap Protocol RESPONSE header (page 7, paragraphs 82 and 96).

23. As per claim 38, Araujo and Inoue taught the invention substantially as claimed in claims 37 above. Inoue further taught wherein the network address request header comprises a Dynamic Host Configuration Protocol DISCOVER header or a Bootstrap Protocol REQUEST header (page 7, paragraphs 82 and 96).

24. Claims 5-7, 15-16, 30 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araujo and Inoue in view of Singhal et al, U.S. Patent 6,633,761(hereinafter Singhal).

25. As per claims 5 and 15, Araujo and Inoue taught the invention substantially as claimed in claims 1 and 12 above. Araujo and Inoue did not teach a payload with information to be applied to an application at the second client. Singhal taught wherein the first point-to-point protocol signal comprises a payload including information to be applied to an application residing at a second client (col. 9, lines 60-62).

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo, Inoue and Singhal because Singhal's system of a payload with information to be applied to an application residing at a second client would increase the flexibility of Araujo's and Inoue's systems by allowing an administrator to remotely transfer information to a client over the network.

27. As per claims 6, 30 and 35, Singhal further taught wherein the application residing at the second client comprises a maintenance application operable to diagnose operational characteristics of the second client (col. 14, lines 3-6).

28. As per claims 7 and 16, Araujo and Inoue taught the invention substantially as claimed in claims 1 and 12 above. Araujo and Inoue did not teach a payload with at least a portion of an application to be installed on the second client. Singhal taught wherein the first point-to-point protocol signal comprises a payload including at least a portion of an application to be installed on the second client (col. 9, lines 60-62).

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo, Inoue and Singhal because Singhal's system of a payload with information to be applied to an application residing at a second client would increase the flexibility of Araujo's and Inoue's systems by allowing an administrator to remotely transfer information to a client over the network.

30. As per claim 36, Araujo and Inoue taught the invention substantially as claimed in claim 33 above. Araujo and Inoue did not teach an application to process the at least a portion of the payload and to generate an output. Singhal taught wherein the application comprises an application operable to process the at least a portion of the payload and to generate an output to be communicated toward another network element (col. 9, lines 60-62; col. 14, lines 1-12).

31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo, Inoue and Singhal because Singhal's system of process the at least a portion of the payload and to generate an output would increase the efficiency of Araujo's and Inoue's systems by providing automatic information updates to registry of different devices.

32. Claims 8-9, 17, 22, 26-27 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araujo and Inoue in view of Zhang, U.S. Patent 6,108,345 (hereinafter Zhang).

33. As per claims 8, 17, 22, 26 and 39, although, Araujo and Inoue taught encapsulating the first point-to-point protocol signal within a MAC header with MAC identifier prior to encapsulating the first point-to-point protocol signal within the network request header (see Inoue, fig. 10), however, Araujo and Inoue did not specifically detailing the header encapsulated

prior to the DHCP header is a tunneling header. Zhang taught a tunneling header comprising a header with a MAC identifier (col. 10, lines 16-23).

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo, Inoue and Zhang because Zhang's teaching of encapsulated tunneling header would increase the efficiency of Araujo's and Singhal's systems by allowing the process of address determination to be included in a packet in a point-to-point tunnel session.

35. As per claims 9, 27 and 40, Araujo, Inoue and Zhang taught the invention substantially as claimed in claims 8, 26 and 39 above. Araujo further taught wherein the tunneling header comprises a tunneling header selected from the group consisting of a Layer Two Tunneling Protocol (L2TP) header, a Point-to-Point Tunneling Protocol (PPTP), or a Layer Two Forwarding (L2F) header (col. 5, lines 1-4; col. 9, lines 4-15).

36. Applicant's arguments with respect to claims 1, 3-24, 26-33 and 35-45, filed 07/02/04, have been fully considered but are not deemed to be persuasive and are moot in view of the new grounds of rejection.

37. In the remark applicant argued that

- (1) the cited prior arts fail to teach communicating the encapsulated signal toward a tunneling server operable to identify and remove the network address

request header, to encapsulate the point-to-point protocol signal within a network address response header, and to communicate the encapsulated response signal toward a second client.

(2) the cited prior arts do not teach communicating the encapsulated signal toward a tunneling server comprises communicating the signal toward a router configured to relay network address requests to the tunneling server without referencing a routing table indexed by data channel addresses.

(3) the cited prior arts fail to teach that the first point-to-point protocol signal further comprises a payload including at least a portion of an application to be installed on the second client.

38. In response to point (1), Araujo taught the invention substantially as claimed for communicating the encapsulated signal toward a tunneling server (col. 9, lines 34-36; col. 6, lines 1-3, 32-38) operable to identify and remove the protocol header (col. 13, lines 37-47), to encapsulate the point-to-point protocol signal within a protocol response header, and to communicate the encapsulated response signal toward a second client (col. 13, lines 34-36, 48-56).

39. Araujo did not specifically teach encapsulating a network address request header. Inoue taught encapsulating a dynamic host configuration protocol header into a signal (figs. 9 and 10; page 7, paragraphs 82 and 96).

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40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo and Inoue because Inoue's method of encapsulating a dynamic host configuration protocol header into a signal would increase the alertness of Araujo's system by providing the recognition that the IP address is to be acquired by the DHCP on behalf of the client (page 7, paragraph 84).

41. In response to point (2), Araujo taught communicating the encapsulated signal toward a tunneling server (col. 9, lines 34-36; col. 6, lines 1-3, 32-38) comprises communicating the signal toward a router configured to relay the signal to the tunneling server (col. 7, lines 17-31).

42. Araujo did not teach a network address request and to relay the network address request without referencing a routing table indexed by data channel addresses. Inoue taught forwarding network address request (e.g. DHCP request) without referencing a routing table indexed by data channel addresses (see Inoue, page 7, paragraph 84).

43. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Araujo and Inoue because Inoue's method of encapsulating a dynamic host configuration protocol header into a signal would increase the alertness of Araujo's system by providing the recognition that the IP address is to be acquired by the DHCP on behalf of the client (page 7, paragraph 84).

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44. In response to point (3), Araujo and Inoue did not teach a payload with at least a portion of an application to be installed on the second client. Singhal taught wherein the first point-to-point protocol signal comprises a payload including at least a portion of an application (e.g. information of the DHCP request) to be installed on the second client (e.g. creating the AUL Registry) (fig. 3; col. 9, lines 60-62).

45. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

46. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Lee whose telephone number is (703) 305-7721. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.



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